ABSTRACT OF THE DISCLOSURE

A computer implemented method and system for transferring data packets includes intercepting a stream of data packets at the connectionless network layer from a client or server, encoding and encapsulating the data packets, transmitting the encoded data packets, decoding

5   and decapsulating the data packets, and injecting the decoded and decapsulated data packets into the connectionless network layer at a client or server. The encoding of the packets is based on detecting repetitions that could exist anywhere in the data stream. The repetitions are not necessarily within a single packet but could occur across multiple packets and multiple sessions. One of the encoding algorithms includes comparing the payloads of packets with identical signatures and transmitting the full packet only when the payload had not previously been sent.